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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/644,096

Applicant(s)

LEE, SUNG-HI

Examiner

HILINA S. KASSA

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-4 and 6-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment submitted on 09/04/2008 has been acknowledged.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4 and 6-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikenoue et al. (US Patent Number 5,268,993) in view of Kokubo (Japanese Publication Number 08-123639).

(1) regarding claim 1:

In figures 4-12b, Ikenoue et al. disclose a method of utilizing a memory of a printer printing using emulation information stored in a first or a second memory (32, 33, figure 4; column 4, lines 10-14), the method comprising:

storing emulation information selected from among a plurality of emulation information stored into the first memory into a predetermined storage area of the second memory when the printer is initialized (**column 4, lines 58-68; note that a specification emulation is selected then it gets registered in the memory in the processing device and general initial values are stored**);

analyzing a type of emulation information of printing data transmitted to the printer (**column 5, lines 59-61; lines 65-68; column 6, lines 1-2; note that the selected emulation type is analyzed then printing modes get registered in the printer**);

determining whether a type of the emulation information stored into the predetermined storage area of the second memory matches the type of the emulation information analyzed (**column 6, lines 64-68; note that emulation information gets analyzed if it is different from the current already stored emulation**); and

if the type of the emulation information stored into the predetermined storage area does not match the type of the emulation information analyzed (**column 6, line 64-column 7, line 9; note that the emulation information is checked if it is different from the current emulation**), storing the retrieved emulation information into the predetermined storage area of the second memory in which the replaced emulation information was stored (**column 7, lines 30-40; if the emulation information is different, the same emulation gets initialized and the analytical conditions get set**

in the style and in column 8, lines 13-17; note that the styles of the print mode are stored in the non-volatile memory).

Ikenoue et al. disclose all of the subject matter as described as above except for specifically teaching retrieving emulation information from the emulation information stored in the first memory having an emulation information type matching the type of the emulation information analyzed and replacing the emulation information stored in the second memory with the retrieved emulation information.

However, Kokubo discloses retrieving emulation information from the emulation information stored in the first memory having an emulation information type matching the type of the emulation information analyzed (**paragraph [0012], line 9-paragraph [0013], lines 7; note that when it is investigated that printer 2 does not have the appropriate emulation information, the active emulation set that match printer 2 are acquired and transmitted**) and replacing the emulation information stored in the second memory with the retrieved emulation information (**paragraph [0014], lines 1-4; note that the data received by printer 2 from the information processor is stored in the receive buffer in which it was provided by RAM 14. According to paragraph [0010], lines 7-8, RAM14 is used to store/load various emulation programs**).

Ikenoue et al. and Kokubo are combinable because they are from the same field of endeavor i.e. processing data for printer in emulation or plurality of modes. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to retrieving emulation information from the emulation information stored in the first memory having an emulation information type matching the type of the emulation

information analyzed and replacing the emulation information stored in the second memory with the retrieved emulation information. The suggestion/motivation for doing so would have been in order to enable high-speed print processing without performing unnecessary emulation switching processing (abstract, lines 1-4). Therefore, it would have been obvious to combine Ikenoue et al. and Kokubo to obtain the invention as specified in claim 1.

(2) regarding claim 2:

Ikenoue et al. further disclose, wherein the predetermined storage area of the second memory has a storage capacity to store a biggest size emulation information from among the plurality of emulation information stored in the first memory (**column 2, lines 19-45; column 4, lines 60-68; column 5, lines 17-44; note that the first memory stores the initial emulation values in various setting items; however, the second memory stores user's own font i.e. a user can change the values of the setting items after setting the initial values with in the range setting. Then the values that are changed by the user get entered. So, it is clear that the second memory could store more than the first storage).**

(3) regarding claim 3:

Ikenoue et al. further disclose, a printer memory utilization apparatus printing using emulation information stored in a first or a second memory (**32, 33, figure 4; column 4, lines 10-14**), the apparatus comprising:

an emulation information retrieving unit that retrieves emulation information from among a plurality of emulation information stored into the first memory (**column 5, lines 26-44; note that the emulation information along with the initial values of each emulation has been stored and could be retrieved or requested according to user**) and stores the retrieved emulation information into a predetermined storage area of the second memory (**column 5, lines 54-62; note that the emulation can be changed from data processing devices i.e. the storage could be in another storage device**);

a printing data analyzing unit that analyzes a type of emulation information of received printing data to support printing the received printing data and outputs the type of the emulation information analyzed (**column 6, line 64-column 7, line 9; note that the emulation information gets analyzed as it is received from the host device**);
and

an emulation information comparing unit that compares a type of the emulation information stored into the predetermined storage area of the second memory with the type of the emulation information analyzed and outputs a comparison result (**column 7, lines 29-40; note that based on the comparison is made if the emulation assigned from the host are different from the emulation currently used. Then the results get notified to user with the operational panel**),

wherein the emulation information retrieving unit *replaces the stored emulation information by* retrieving an emulation information type from the first memory matching the type of the emulation information analyzed (**column 7, lines 30-40; note that the standard style is used if the comparison result is different from the standard emulation information**), in response to the comparison result (**column 7, lines 41-45**), and stores the retrieved emulation information into the predetermined storage area of the second memory in which the replaced emulation information was stored (**column 8, lines 13-17; note that the style of the emulation gets stored in the nonvolatile memory**).

Ikenoue et al. disclose all of the subject matter as described as above except for specifically teaching retrieving an information type from the first memory matching the type of the emulation information and replacing the emulation information stored in the second memory with the retrieved information.

However, Kokubo discloses retrieving an information type from the first memory matching the type of the emulation information (**paragraph [0012], line 9-paragraph [0013], lines 7; note that when it is investigated that printer 2 does not have the appropriate emulation information, the active emulation set that match printer 2 are acquired and transmitted**) and replacing the emulation information stored in the second memory with the retrieved information (**paragraph [0014], lines 1-4; note that the data received by printer 2 from the information processor is stored in the receive buffer in which it was provided by RAM 14. According to paragraph [0010], lines 7-8, RAM14 is used to store/load various emulation programs**).

Ikenoue et al. and Kokubo are combinable because they are from the same field of endeavor i.e. processing data for printer in emulation or plurality of modes. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to retrieve an information type from the first memory matching the type of the emulation information and replacing the emulation information stored in the second memory with the retrieved information. The suggestion/motivation for doing so would have been in order to enable high-speed print processing without performing unnecessary emulation switching processing (abstract, lines 1-4). Therefore, it would have been obvious to combine Ikenoue et al. and Kokubo to obtain the invention as specified in claim 3.

(4) regarding claim 4:

Ikenoue et al. further disclose, wherein the predetermined storage area of the second memory has a storage capacity to store a biggest size emulation information from among the plurality of emulation information stored in the first memory (**column 2, lines 19-45; column 4, lines 60-68; column 5, lines 17-44; note that the first memory stores the initial emulation values in various setting items; however, the second memory stores user's own font i.e. a user can change the values of the setting items after setting the initial values with in the range setting. Then the values that are changed by the user get entered. So, it is clear that the second memory could store more than the first storage).**

(5) regarding claim 6:

Ikenoue et al. further disclose, the apparatus of claim 3, wherein the emulation information retrieving unit retrieves the matching emulation information type from the first memory (**column 6, lines 64-66; note that based on the comparison of the emulation information of the host and the printer, in order to match the information the current style gets take as a standard style from the table**), if according to the comparison result the emulation information type of the received printing data does not match the emulation information type stored in the predetermined storage area of the second memory (**column 7, lines 30-40; note that when the emulation result is different, the standard style which is stored in the nonvolatile memory 36 as explained in column 8, lines 13-17**).

(6) regarding claim 7:

In figures 1 and 4, Ikenoue et al. further disclose a printer (**10, figure 1; column 3, lines 26-28**), comprising:

a first memory storing a plurality of deactivated printer emulation information (**32, figure 4; column 4, lines 10-12**);

a second memory storing active emulation information (**33, figure 4; column 4, lines 12-14**); and

a programmed computer processor performing a process (**31, figure 4; column 4, lines 7-8**), comprising:

analyzing a type of emulation information of received print data (**column 5, lines 59-62**),

determining whether *an original* type of the active emulation information matches the analyzed emulation information type of the received print data (**column 6, lines 64-68**),

storing in the second memory, from the deactivated emulation information stored in the first memory (**column 7, lines 10-16**), an emulation information type matching the analyzed emulation information type of the received print data according to the determining, as a new activated emulation information (**column 7, lines 16-20, lines 31-40; note that when the same emulation is present, user's setting or convenience can be increased by switching the style in order to print in the desired conditions**), and

Ikenoue et al. disclose all of the subject matter as described as above except for specifically teaching retrieving emulation information from the first memory having an emulation information type matching the type of the analyzed emulation information replacing the original type of the active emulation information with the retrieved emulation information and storing the retrieved emulation information into the predetermined stored area of the second memory in which the replaced emulation information was stored.

However, Kokubo discloses retrieving emulation information from the first memory having an emulation information type matching the type of the analyzed emulation information (**paragraph [0012], line 9-paragraph [0013], lines 7; note that when it is investigated that printer 2 does not have the appropriate emulation information, the active emulation set that match printer 2 are acquired and transmitted**) replacing the original type of the active emulation information with the retrieved emulation information (**paragraph [0014], lines 1-4; note that the data received by printer 2 from the information processor is stored in the receive buffer in which it was provided by RAM 14**) and storing the retrieved emulation information into the predetermined stored area of the second memory in which the replaced emulation information was stored (**paragraph [0010], lines 7-8, note that RAM14 is used to store/load various emulation programs**).

Ikenoue et al. and Kokubo are combinable because they are from the same field of endeavor i.e. processing data for printer in emulation or plurality of modes. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to retrieve emulation information from the first memory having an emulation information type matching the type of the analyzed emulation information replacing the original type of the active emulation information with the retrieved emulation information and storing the retrieved emulation information into the predetermined stored area of the second memory in which the replaced emulation information was stored. The suggestion/motivation for doing so would have been in order to enable high-speed print processing without performing unnecessary emulation switching processing (abstract,

lines 1-4). Therefore, it would have been obvious to combine Ikenoue et al. and Kokubo to obtain the invention as specified in claim 7.

(7) regarding claim 8:

Ikenoue et al. further disclose, the printer of claim 7, wherein the first memory is a non-volatile memory and the second memory is a volatile memory (**column 8, lines 13-17; note that the original style of emulation is stored in the non-volatile memory. It is described in claim 5 that the RAM is used as the second memory. It is however inherent that a RAM is a volatile memory**).

(8) regarding claim 10:

Ikenoue et al. further disclose, a printer, comprising: a programmed computer processor activating and deactivating printer emulation modes in a predetermined random access memory area in response to emulation information type of received print data (**column 2, lines 19-45; note that the printing processing sets a setting values which correspond to the analytical conditions wherein selects a predetermined store means. As it is described above, the store means for the second memory is considered to be the RAM**).

Ikenoue et al. disclose all of the subject matter as described as above except for specifically teaching activating and deactivating comprising retrieving emulation

information having an emulation information type matching the emulation information type of the received print data, replacing the printer emulation mode in the random access memory with the retrieved emulation information.

However, Kokubo discloses activating and deactivating comprising retrieving emulation information having an emulation information type matching the emulation information type of the received print data (**paragraph [0012], line 9-paragraph [0013], lines 7; note that when it is investigated that printer 2 does not have the appropriate emulation information, the active emulation set that match printer 2 are acquired and transmitted**), replacing the printer emulation mode in the random access memory with the retrieved emulation information (**paragraph [0014], lines 1-4; note that the data received by printer 2 from the information processor is stored in the receive buffer in which it was provided by RAM 14. According to paragraph [0010], lines 7-8, RAM14 is used to store/load various emulation programs**).

Ikenoue et al. and Kokubo are combinable because they are from the same field of endeavor i.e. processing data for printer in emulation or plurality of modes. At the time of the invention, it would have been obvious to a person of ordinary skilled in the art to activate and deactivate comprising retrieving emulation information having an emulation information type matching the emulation information type of the received print data, replacing the printer emulation mode in the random access memory with the retrieved emulation information. The suggestion/motivation for doing so would have been in order to enable high-speed print processing without performing unnecessary emulation switching processing (abstract, lines 1-4). Therefore, it would have been

obvious to combine Ikenoue et al. and Kokubo to obtain the invention as specified in claim 10.

5. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikenoue et al. (US Patent Number 5,268,993) and Kokubo (Japanese Publication Number 08-123639) as applied to claims 1, 3, 7 and 10 above, and further in view of Smith (US Patent Number 6,128,094, see IDS).

(1) regarding claim 9:

Ikenoue et al. and Kokubo disclose all of the subject matter as described as above except for teaching wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form, and the programmed computer processor retrieves compressed deactivated emulation information from the first memory, decompresses the retrieved deactivated emulation information, and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information.

However, Smith discloses a printer wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form (**column 7, lines 21-26**), and the programmed computer processor retrieves compressed deactivated emulation information from the first memory (**column 3, lines 56-59; column 4, lines 11-16**), decompresses the retrieved deactivated emulation

information (**column 4, lines 13-14**), and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information (**column 4, lines 14-16, note that the RAM is the secondary storage**).

Ikenoue et al. and Kokubo are combinable because they are from the same field of endeavor i.e. i.e. processing data for printer in emulation or plurality of modes. Ikenoue et al., Kokubo and Smith are combinable because they are from the same field of endeavor i.e. network interface of printing apparatus and processing data for printer emulation or plurality of modes. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a printer wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form, and the programmed computer processor retrieves compressed deactivated emulation information from the first memory, decompresses the retrieved deactivated emulation information, and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information. This is because it helps to save memory size and it is faster to be processed. The suggestion/motivation for doing so would have been that it is efficient for higher print processing speed and it saves memory space (column 3, lines 62-67). Therefore, it would have been obvious to combine Ikenoue et al. and Kokubo with Smith to obtain the invention as specified in claim 9.

(2) regarding claim 11:

Ikenoue et al. and Kokubo disclose all of the subject matter as described as above except for teaching wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form, and the programmed computer processor retrieves compressed deactivated emulation information from the first memory, decompresses the retrieved deactivated emulation information, and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information.

However, Smith discloses a printer wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form (**column 7, lines 21-26**), and the programmed computer processor retrieves compressed deactivated emulation information from the first memory (**column 3, lines 56-59; column 4, lines 11-16**), decompresses the retrieved deactivated emulation information (**column 4, lines 13-14**), and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information (**column 4, lines 14-16, note that the RAM is the secondary storage**).

Ikenoue et al. and Kokubo are combinable because they are from the same field of endeavor i.e. i.e. processing data for printer in emulation or plurality of modes. Ikenoue et al., Kokubo and Smith are combinable because they are from the same field of endeavor i.e. network interface of printing apparatus and processing data for printer

emulation or plurality of modes. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a printer wherein the plurality of deactivated emulation information stored in the first memory are in compressed or uncompressed form, and the programmed computer processor retrieves compressed deactivated emulation information from the first memory, decompresses the retrieved deactivated emulation information, and stores the retrieved decompressed deactivated emulation information in the second memory as the new activated emulation information. This is because it helps to save memory size and it is faster to be processed. The suggestion/motivation for doing so would have been that it is efficient for higher print processing speed and it saves memory space (column 3, lines 62-67). Therefore, it would have been obvious to combine Ikenoue et al. and Kokubo with Smith to obtain the invention as specified in claim 11.

Examiner Notes

6. The Examiner cites particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore could be reached at (571) 272- 7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pari-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hilina S Kassa/

Examiner, Art Unit 2625

December 18, 2008

/David K Moore/

Supervisory Patent Examiner, Art Unit 2625